



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,217	08/20/2003	Yoshinori Yamagishi	03-542	6462
34704 7590 10/05/2010 BACHMAN & LAPOINTE, P.C. 900 CHAPEL STREET SUITE 1201 NEW HAVEN, CT 06510				
EXAMINER				
IP, SIKYIN				
ART UNIT		PAPER NUMBER		
1735				
MAIL DATE		DELIVERY MODE		
10/05/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/644,217

Applicant(s)

YAMAGISHI ET AL.

Examiner

Sikyin Ip

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/14/2010; 2/9/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 11-13 are rejected under 35 U.S.C. § 103 as being unpatentable over US 2002/0015657 to Dong.

Dong discloses Cu-Zn-Sn-Si alloys ([0017] to [0019]) with alpha phase matrix and hardness range (Table 2). The other phase such as γ , κ , or β is controlled by Si/Sn ratio to be dispersed between alpha phase regions ([0029] to [0030]) which read on claimed 90% or more alpha phase. Nonetheless, the amount of alpha phase is a known result effective variable to improve dezincification ([0002] to [0005]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of alpha phase, since it has been held that discovering an

optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to the instant recited expressions that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin*, et al., 149 USPQ 685, 688.

Claims 1 and 11-13 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 4259124 to Smith et al (reference of record) in view of US 2002/0015657 to Dong.

Smith discloses features including the claimed Cu-Zn alloy composition and alpha-phase structure (col. 2, lines 1 to col. 3, line 7) except for hardness and specific amount of lead. Dong discloses copper alloy composition similar to Smith would have recited hardness. Therefore, ordinary skill artisan would recognize said hardness is conventional and can be obtained by conventional processing for copper alloy of cited prior arts. Smith teaches to add lead to improve machinability but does not disclose the amount of lead (col. 2, line 67 to col. 3, line 7). Dong discloses 0.5 to 3 wt.% lead would improve machinability ([0033] and [0034]). In view the teachings of Dong, ordinary skill artisan would recognize 0.5 to 4.5 wt.% lead would be included in the Cu-Zn alloy of Smith in order to improve machinability. It has been held that combining known ingredient having known functions, to provide a composition having the additive effect of each of the known functions is within realm of performance of ordinary skill

artisan. In re Castner, 186 USPQ 213 (217). The use of conventional materials to perform their known functions in a conventional process is obvious. In re Raner, 134 USPQ 343 (CCPA 1962).

With respect to the instant recited expressions that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, In re Cooper and Foley 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, Taklatwalla v. Marburg, 620 O.G. 685, 1949 C.D. 77, and In re Pilling, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. In re Austin, et al., 149 USPQ 685, 688.

Response to Arguments

Applicant's arguments filed January 14, 2010 have been fully considered but they are not persuasive.

~~Applicants argue that "the apparent content B' of zinc in the copper alloy is not the discovery of a general formula if it covers a composition described in the prior art."~~
Applicants argue that "it is clear that the apparent content B' of zinc in the copper alloy is not the discovery of a general formula if it covers a composition described in the prior art."

But, there is no factual evidence that recited B' of zinc is critical and possesses unexpected result.

Applicants argue that Dong fail to disclose claimed compositions, hardness, and B'. However, applicants fail to argue that the composition disclosed by Dong in [0017] – [0019] does not overlap claimed alloy composition and hardness (Table 2). The examples of Dong have shown that claimed composition is not critical to hardness, because of claimed hardness and/or B' can be obtained by composition outside claimed elements' ranges.

Art Unit: 1793

~~Dong also fails to disclose or suggest any methods for producing a copper alloy, comprising the steps of casting the~~
 Applicants argue that " ~~producing a copper alloy, comprising the steps of casting the~~ "

But, it is immaterial because first, none of rejected claims recites any argued steps. Second, instant claims are product claims. Third, recited composition, alpha phase, and hardness are already disclosed by Dong (see rejection by Dong). Fourth, applicants fail to provide factual evidence to substantiate that the argued method steps are critical for claimed product.

Applicants argue that examples of Dong failed to disclose claimed invention. But, it is well settled that the examples of the cited reference are given by way of illustration and not by way of limitation. In re Widmer, 353 F.2d 752, 757, 147 USPQ 518, 523 (CCPA 1965), In re Boe, 148 USPQ 507 (CCPA 1966), and In re Snow, 176 USPQ 328. Moreover, the examples with different compositions have shown that instant composition is not critical for hardness.

Applicants' argument with respect to examples of Dong and B' of zinc is noted. But, applicants' fail to show that the claimed B' of zinc is critical and possesses unexpected result.

~~With also fails to disclose or suggest any copper alloy containing at least one of 0.02 to 0.18 wt. of phosphorus, 0.02 to 3.0 wt. of nickel and 0.02 to 6.0 wt. of iron, the total amount of phosphorus, nickel and iron being in the range of from 0.02 to 9.0 wt. %~~
 Applicants argue that " ~~the range of from 0.02 to 9.0 wt. %~~ " But,

as well as its stress corrosion resistance. Various other elements may be added to the alloy of the present invention to suit various purposes. For example, a grain refining element selected from the group consisting of 0.001 to 5.0% by weight iron, 0.001 to 5.0% by weight cobalt, 0.001 to 1.0% by weight chromium, 0.001 to 1.0% by weight zirconium, 0.001 to 1.0% by weight nickel, 0.001 to 1.0% by weight titanium, or any combination thereof may be added to the alloy. Various other elements such

applicants' argument is found inconsistent with col. 2 " ~~may be added to the alloy. Various other elements such~~ "

Art Unit: 1793

Applicants' argument with respect to lead and hardness of Smith is noted. But, in response to applicants' arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Szyszkowski is withdrawn in view of applicants' remark.

Conclusion

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121 and 37 C.F.R. Part §41.37 (c)(1)(v).

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Thursday from 5:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Jessica L. Ward, can be reached on (571)-272-1223.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sikyin Ip/
Primary Examiner, Art Unit 1793
September 30, 2010